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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CAPUTO, LISA M	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/761,949	HEPWORTH ET AL.	
	Examiner	Art Unit	
	Lisa M. Caputo	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 7-9 and 16-18 is/are allowed.

6)☒ Claim(s) 1,2,4-6,10,11 and 13-15 is/are rejected.

7)☒ Claim(s) 3 and 12 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 21 January 2004 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference number 410 is in Figure 4 but is not in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because the word "disclosed" is used.

Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be

clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 1, 7, and 16 are objected to because of the following informalities:

In claim 1, lines 1-8, applicant is reciting an apparatus. However, lines 9-16 enumerate steps of a method. Please ensure that the claims are clearly either apparatus, system, or method claims.

In claim 7, lines 1-12, applicant is reciting an apparatus. However, lines 13-22 enumerate steps of a method. Please ensure that the claims are clearly either apparatus, system, or method claims.

In claim 16, lines 1-5, applicant is reciting an apparatus. However, lines 6-14 enumerate steps of a method. Please ensure that the claims are clearly either apparatus, system, or method claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2, 4-6, 10-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Seo (U.S. Patent No. 6,073,852) in view of Bianco et al. (U.S. Patent No. 4,816,659, from hereinafter "Bianco").

Seo teaches a data symbol reader with an observation window. Regarding claim 1, Seo teaches a graphical code reader (data symbol reader 1 with a grip portion 21 and a head portion 22) that comprises a light emitter 41 that consists of two LEDS each emitting infrared light, an image sensor (CCD 43), a lens (converging lens group 46) positioned to focus light, a processor (controller 15 within the signal processing circuit 5), and a memory (memory 12) in electronic communication with the processor (see Figures 1-4, col 4 line 40 to col 5 line 25, col 7, lines 5-45). Further, it is taught that instructions are stored in the memory, the instructions being executable by the processor to implement a method comprising illuminating the LEDs at different illumination intensity levels, capturing a digital image for processing, the digital image being an electronic representation of an optical image formed on the image sensor, and

processing the digital image to attempt to decode a graphical code within the digital image (see col 7, line 5 to col 9 line 6).

Regarding claim 1, Seo fails to teach that there is both an infrared LED and a red light LED, and further, that there are instructions to illuminate the infrared LED at an infrared illumination intensity level and illuminate the red LED at a red illumination intensity level, as also recited in claim 10.

Bianco teaches a barcode reader head for use in a barcode reader that comprises an infrared light-emitting diode (LED) (illuminating source 16 or 18), a red LED (illuminating source 16 or 18), an image sensor (photodetector 28), and a lens (lens 24) positioned to focus reflected light on the image sensor (see Figure 1, col 3 lines 29-65).

In view of the teaching of Bianco, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the read head within Seo with the read head of Bianco in order to employ the use of both an infrared LED and a red light LED, and hence to use the correct intensity operation levels for them, so that the system is more comprehensive and able to illuminate at different wavelengths for different types of codes, while still maintaining size efficiency by having a smaller system, but still one of each LED to perform more scanning functions.

Regarding claims 2 and 11, Seo teaches that the method comprises detecting user input and utilizing this input to set illumination levels when it is taught that the user utilizes the trigger 14 on the reader (see Figure 1, col 7, lines 53-65).

Regarding claims 4-6 and 13-15, Seo does not specifically teach the different wavelengths at which the LEDs are centered at.

Bianco teaches that conventional infrared and red light LEDs are used, in which the infrared LED is centered around 700 or 735 nanometers and the red light LED is centered around 660 nanometers (see Figure 1, col 3 lines 29-65).

In view of the teaching of Bianco, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ these wavelength bands because these wavelength bands are the part of the electromagnetic spectrum that are used for optimal operation for scanning.

Allowable Subject Matter

6. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 7-9 and 16-18 contain allowable subject matter, but are objected to due to informalities, but would be allowable if rewritten in proper form.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 3 and 12, the best prior art of Seo and Bianco fail to teach the specific method of determining brightness and desired brightness of the digital image, then determining a difference signal which indicates a difference and adjusting both the infrared and red illumination intensity levels. Additional prior art in the form of Aoki (U.S. Patent No. 5,621,202), which discloses an encoded symbol reader which determines

the uniformity of brightness of the background image teaches that, optionally, the processing means further includes first means for obtaining a maximum brightness of the image, and second means for obtaining a minimum brightness of the image. If a difference between the maximum brightness and the minimum brightness is greater than a predetermined value, then the determining means determines that the image has uniform brightness (see col 2, lines 3-9). Although Aoki teaches brightness determination within readers, there is no disclosure about desired brightness, or the fact that both LED illumination levels are changed.

Regarding claims 7-9 and 16-18, the best prior art of Seo and Bianco fails to teach a near field that includes a near field image sensor region and a near field lens and a far field that includes a far field image sensor region and a far field lens within the graphical code reader that is able to focus light in different areas, and mainly, that a first distance between the near field lens and the near field image sensor region is greater than a second distance between the far field lens and the far field image sensor region.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 5,248,872 to Stewart which teaches a device for optically reading marked ballots using infrared and red emitters.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Lisa M. Caputo*** whose telephone number is **(571) 272-2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday through Friday. If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-2398.** The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**lisa.caputo@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMC
May 27, 2005

KARL D. FRECH
PRIMARY EXAMINER